

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PF-0706 PCT	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 14831	International filing date (day/month/year) 26/05/2000	(Earliest) Priority Date (day/month/year) 27/05/1999
Applicant INCYTE GENOMICS, INC. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☒ contained in the international application in written form.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

HUMAN SORTING NEXINS

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/14831**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 18 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 20, 21, 23 and 24
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-10, 16-19, 22, 25-27 completely and 11-15 partially

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No

US 00/14831

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C07K16/18 C12Q1/68 A61K38/17

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K C12Q A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EMBL database, Heidelberg, FRG Emhum2 accession number AF121863 27 April 1999 TEASDALE, R.D. ET AL.: "Homo sapiens sorting nexin 14 (SNX14) mRNA, partial cds" XP002149759 the whole document --- -/--	1,3,6,7, 9,11-15

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

12 October 2000

Date of mailing of the international search report

[11. 1. 01]

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Fuchs, U

INTERNATIONAL SEARCH REPORT

International Application No

US 00/14831

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 99 38972 A (CHIRON CORP., HYSEQ INC.) 5 August 1999 (1999-08-05)	1,3, 6-16,18, 19,22, 25-27 2,4,5,17
A	abstract page 1, line 1 -page 17, line 18 page 29, line 4 -page 32, line 10 page 36, line 12 -page 49, line 24 page 68, line 3 -page 76, line 14 page 241; table 1 page 544; table 2 page 653 -page 655; claims 1,9,11-14 SEQ ID NO: 4852 page 2306 -page 2307 ---	
P,X	EMBL database, Heidelberg, FRG Emhum2 accession number AK000362 22 February 2000 SUGANO, S. ET AL.: "Homo sapiens cDNA FL20355 fis, clone HEP15804, highly similar to AF121863 Homo sapiens sorting nexin 14" XP002149760 the whole document ---	1,3,6,7, 9,11-15
A	US 5 804 412 A (GILL, G.N. ET AL.) 8 September 1998 (1998-09-08) abstract column 3, line 47 -column 24, line 13 column 43 -column 44; claims 1-17 -----	1-19,22, 25-27

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

US 00/14831

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9938972	A	05-08-1999	AU 2471699 A	16-08-1999
			EP 1053319 A	22-11-2000
			AU 2095599 A	19-07-1999
			AU 4187499 A	29-11-1999
			WO 9933982 A	08-07-1999
			WO 9958675 A	18-11-1999
			AU 6263999 A	17-04-2000
			WO 0018916 A	06-04-2000

US 5804412	A	08-09-1998	NONE	

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 20, 21, 23 and 24

Claims 20, 21, 23 and 24 refer to an agonist and an antagonist of a polypeptide of claim 1 without giving a true technical characterization. Moreover, no such compounds are defined in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject matter is not sufficiently disclosed and supported (Art. 5 and 6 PCT).

No search can be carried out for such purely speculative claims whose wording is, in fact, a mere recitation of the result to be achieved.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-10, 16-19, 22,
25-27 completely and 11-15 partially

An isolated polypeptide comprising an amino acid sequence selected from the group consisting of: a) an amino acid sequence having the SEQ ID NO: 1, b) a naturally occurring amino acid sequence having at least 90% sequence identity to SEQ ID NO: 1, c) a biologically active fragment of SEQ ID NO: 1, d) an immunogenic fragment of SEQ ID NO: 1; an isolated polynucleotide encoding said polypeptide; a recombinant polynucleotide comprising said polynucleotide; a cell transformed with said recombinant polynucleotide; a transgenic organism comprising said recombinant polynucleotide; a method for producing said polypeptide; an isolated antibody which specifically binds to said polypeptide; an isolated polynucleotide comprising a polynucleotide sequence selected from the group consisting of: a) a polynucleotide sequence having the SEQ ID NO: 3, b) a naturally occurring polynucleotide sequence having at least 70% sequence identity to SEQ ID NO: 3, c) a polynucleotide sequence complementary to a); d) a polynucleotide sequence complementary to b); an RNA equivalent of a)-d); a method for detecting a target polynucleotide in a sample having the sequence of said polynucleotide by hybridizing with a probe or by PCR; a pharmaceutical composition comprising an effective amount of said polypeptide; a method for treating a disease or condition associated with decreased expression of functional SNEYN, comprising administering to a patient said pharmaceutical composition; a method for screening a compound for effectiveness as an agonist or antagonist of said polypeptide; a method for screening for a compound that specifically binds to said polypeptide or that modulates the activity of said polypeptide; a method for screening a compound for effectiveness in altering expression of a polynucleotide sequence having the SEQ ID NO: 3;

2. Claims: 28-33 completely and 11-15 partially

An isolated polynucleotide comprising a polynucleotide sequence selected from the group consisting of: a) a polynucleotide sequence having the SEQ ID NO: 3, b) a naturally occurring polynucleotide sequence having at least 70% sequence identity to SEQ ID NO: 4, c) a polynucleotide sequence complementary to a); d) a polynucleotide sequence complementary to b); an RNA equivalent of a)-d); a method for detecting a target polynucleotide in a sample having the sequence of said polynucleotide by hybridizing with a probe or by PCR; a recombinant polynucleotide comprising the polynucleotide sequence SEQ ID NO: 4; a cell transformed

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

with said recombinant polynucleotide; a transgenic organism comprising said recombinant polynucleotide; a method for producing said polypeptide; a method for screening a compound for effectiveness in altering expression of a polynucleotide sequence having the SEQ ID NO: 4.